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THE ETIOLOGY AND DIAGNOSIS OF ARTERIOSCLEROSIS---A CRITICAL STUDY.

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It is not many years ago that arteriosclerosis was looked upon as a senile change which could, however, develop prematurely in young and middle aged persons; heredity, syphilis, lead poisoning and the excessive use of alcohol or tobacco being considered strong predisposing factors. As recently as five years ago Klemperer (Therapie der Gegenwart, Nov., 1905) described four cases, assigning the excessive use of tobacco as the cause in two, respectively, 37 and 44 years of age, and sexual excess as the cause in the other two cases, respectively, 35 and 45 years of age, these elements in the clinical history apparently being considered sufficient etiological factors.

In recent years, however, micropathology, (see Bender, Therapie d. Gegenwart, 3, 1909), experimental research, improved biological chemistry and refined diagnostic methods have evolved many interesting points in connection with arteriosclerosis which have brought about a decided change not only in the opinions concerning the pathology of the condition but also in those concerning the etiology.

Clifford Allbutt divides the cases into three classes:

1st. Involuntary. The process of involution in the aged, not necessarily associated with a rise in the arterial pressure.

*Read before the N. Y. Academy of Pathological Science.

2d. Mechanical. The result of long continued high blood pressure, due to any cause.

3d. Toxic. Due to lead, alcohol, syphilis or similar causes, usually in young people and usually with increased blood pressure. Marchand (Munchener med. Woch., 1904), ascribes all cases to the mechanical fault of increased arterial pressure, due to local injuries or to the general processes such as intoxicants or neutritional disturbances. Osler (7. Edition, 1909), claims that it would seem due to hypertension in all cases, while Welch, of Johns Hopkins, believes that the hypertension is not the direct cause, but that this also is due to the causes which lead to arteriosclerosis. It is evident from this brief review of the opinions quoted that while a specific cause is not known, the conditions which play an important part in the etiology of arteriosclerosis are intoxications and local nutritional disturbances in addition to the usually quoted causes, old age, syphilis and excessive muscular work.

Query: Is it possible to formulate a properly confirmed hypothesis which will explain all the cases as due to a single etiological factor?

It shall be my effort to substantiate the belief that arteriosclerosis is due to the toxic influence of products of incomplete metabolism developed as the direct result of deficient body oxidation.

Several years ago I published a short paper on "Faulty Metabolism as a Cause of Chronic Interstitial Nephritis" which was based on the clinical history and urinary analysis data of 28 cases observed from 5 to 19 years. Since then Ditman published his praiseworthy research on Deficient Oxidation in its Relation to the Etiology of Nephritis (N. Y. Med. Jour., 1909). It has thus been clinically suspected and experimentally demonstrated that sub-oxidation is, at least, the chief cause and probably the usual cause of contracting kidney. All the modern refinements of pathological research have not succeeded in separating chronic interstitial nephritis from arteriosclerosis. It is true that profound changes in the vessels may occur in different parts of the body without renal involvement. It is also true that a contracting kidney may exist without arteriosclerotic changes elsewhere, and that arteriosclerotic changes may exist in the renal vessels without the additional pathological changes usually ascribed to chronic interstitial nephritis. In

clinical, pathological and experimental research, however, all these conditions are not only closely allied but the one almost invariably leads to the other. Your patient, 45 years old, who has been a heavy eater, a moderate toper, an excessive smoker and has led a strenuous business life, comes to you, with the increased blood pressure, the accentuated second heart sound, and the head symptoms—dizziness, headache, momentary attacks of unconsciousness, etc.—of an arteriosclerosis. His urine may show no evidences of a renal lesion, but it does show evidences of suboxidation in many instances. He ultimately dies of apoplexy or contracted kidney. Your post-mortem records will give you the same information—general arteriosclerosis followed by chronic interstitial nephritis or chronic interstitial nephritis followed by arteriosclerotic changes in other parts of the body. Experimental research tells the same story. It is, therefore, reasonable to infer that two conditions so closely connected are most probably due to the same cause as well. Thus my problem is twofold. First, to prove that the conditions usually accepted as causative factors of arteriosclerosis are capable of producing suboxidation, are the result of suboxidation, or are, at least, accompanied by suboxidation. Second, to supply evidence that the toxic influence of products of incomplete metabolism can produce arteriosclerotic changes.

Are the usually ascribed etiological factors of arteriosclerosis the cause, the result or the accompaniment of suboxidation? Allow me to consider them from this viewpoint.

The excessive use of alcohol has generally been considered the most frequent cause of arteriosclerosis. This opinion has been rudely shaken in America, at least, by the writings of Cabot and others who claim that accurate statistics fail to prove this point. In the foreign literature it is also beginning to take second or third place, for example, Edgran claims it the cause in 25 per cent of his cases. While Traube and pathologists generally claim that it acts by contraction of the arterioles they do not explain this on a physiological basis. The action of alcohol on the liver is, however, well known as clinical experience and experimental research have demonstrated. This action probably interferes with the proper hepatic function and results in a faulty protein metabolism, in other words, suboxidation of the nitrogen compounds. Huchard, in his

excellent book, "Diseases of the Heart and Vessels," claimed this years ago, but it has never been generally accepted. In a series of nitrogen partitions of the urine from alcoholic subjects I have never failed in the demonstration of insufficient oxidation.

Excessive quantity of food, excessive drinking of coffee or tea, excessive meat diet, excessive smoking and sedentary habit, cited as causes of arteriosclerosis, are also the very conditions which produce gastric, hepatic and intestinal disturbances and usually one or both of two types, as clinical experience amply demonstrates. Either an intestinal toxemia, the faulty metabolism being due to bacterial action, or a fault in hepatic function which has insufficient oxidation as a result, or both. Experience also demonstrates that these faults may exist in these subjects without any disagreeable manifestations whatever, and are found perchance on careful examination of the urine. It is surprising what large proportion of specimens of urine which are sent to the laboratory for examination because life insurance has been refused on account of traces of albumin, will show evidences of faulty metaboilsm. These people are in apparent good health, between 30 and 40 years of age, in comfortable circumstances, with a clean life insurance record previously, and for one or more of many reasons there is suboxidation and the resulting toxic products are beginning to produce arteriosclerotic changes. The large number of examples of this kind that have come to my notice has firmly established this belief.

Unusual mental activity, worry, wear and tear of business or professional life, sexual excess and some of the infectious diseases such as small-pox, typhoid, etc., are often quoted as causes of arteriosclerosis. There are no indisputable statistics on record to my knowledge to support this claim or to indicate the manner in which these causes act. If we admit them as causes it is as simple to explain their action by the production of faulty body chemistry as it is by direct action on the vessel wall or its nutrition.

Diabetes, obesity, excessive muscular exercise, gout, chronic rheumatism and heredity form another group of quoted causes. The suboxidation in diabetes is well known. In many cases, however, the diabetes is the secondary and not the primary condition. It is produced by arteriosclerotic changes in the pancreas and in the central nervous system. In the obese the fatty infiltrations and the

stasis in the portal vein, and in the severely anemic the defective oxygen carrying power, would explain the faulty metabo'ism. While excessive muscular exercise does increase blood pressure it is far from proven that it is really a cause of arteriosclerosis. Experience does not show an undue number of cases of premature arteriosclerosis in professional athletes or laborers doing hard work in foundries, quite the contrary. Should it be acknowledged as a cause, however, the research work described by Lee would form an ample basis for the belief that it causes decided changes in metabolism. The gouty diathesis is undoubtedly a frequent cause of arteriosclerosis. In this condition a fault in protein metabo'ism certainly exists though it is not constant in type or necessarily in direct proportion to the pathological or clinical manifestations—neither is the change in the arteries. The same may be said of chronic rheumatism. If the faulty metabolism of gout is hereditary why not the faulty metabolism which produces arteriosclerosis?

There remains a consideration of the three most frequently mentioned causes of arteriosclerosis, namely, old age, syphilis and lead poisoning.

Concerning old age, Huchard mentioned years ago, that in old persons the blood is not properly oxidized in the lungs, that it is more venous in character and that this causes intoxication due to the accumulation of products of faulty nitrogen metabolism in the blood which evidence can also be found in the urine. This again supports my belief.

Syphilis is certainly claimed to be the most frequent cause of arteriosclerosis. It, without doubt, often produces changes in the blood vessels but Schroetter, Luck and many modern men claim this is a distinct lesion, a syphilitic endarteritis which can be differentiated from an arteriosclerosis just as a tuberculous endarteritis can be differentiated. It is not within my province to enter into the pathology or the disputed points, but the fact that faulty body chemistry can, as a rule, be demonstrated in arteriosclerosis and not in the syphilitic cases would seem an additional argument in favor of the modern view.

Concerning the changes produced in the arteries by chronic lead poisoning, Schroetter quotes Kolisko as saying that while they have much in common with arteriosclerosis the minute changes are not

the same. The cases show distinct gouty deposits, however, particularly in the big toe. Osler, Roberts and Ralfe all mention the faulty nitrogen metabolism in the urine as well; though I lack actual experience, I have no doubt but that this can be demonstrated.

If we are allowed to exclude syphilis from the list of causes it has thus not been difficult to show that all other conditions which are said to produce arteriosclerosis are direct causes of deficient body oxidation and thus cause the production of toxic products of incomplete metabolism.

Is there sufficient evidence to prove that this toxic influence of products of incomplete metabolism can produce arteriosclerotic changes?

Arteriosclerosis is a pathological condition the early stages of which produce no symptoms, and it often cannot be recognized at this time even if suspected. Unless there is some renal involvement, the urine of these patients is not subjected to close scrutiny at regular intervals, and on this account it has not been possible to search out of laboratory records a sufficient number of cases in which the urine has been followed for a period of years to prove the existence of evidences of faulty metabolism. If, however, we are willing to admit that the contracting kidney is but a phase of the general condition under consideration, then I can present the following experiences. I have examined my records with the idea of tracing a number of cases of contracting kidney which presented evidences of faulty metabolism in the urine and from which specimens were closely examined at longer or shorter intervals over periods of, at least, five years, some of these, if possible, prior to the development of indications of an actual pathological lesion of the kidney. In one case 35 urine examinations were made during a period of 19 years. The early records, during the first nine years, show nothing abnormal, the examinations having been made as a matter of precaution before anæsthesia and before application for life insurance. During the tenth year of this period with some symptoms referable to the gastrointestinal tract, the urine contained a pronounced excess of indican and a relative excess of ethereal sulphates, but no fault in the nitrogen partition as we used to make it at that time. During the following two years three specimens

were examined with the same result. For the following five years the urine presented evidences of a functional albuminuria, the indications of faulty metabolism noted and the clinical manifestations of an arteriosclerosis. At this time the classical urinary picture of a contracting kidney was first observed—large daily amount, pale color, low gravity, deficient solids, traces of albumin and few casts, with the same evidences of faulty metabolism mentioned. Since then the patient has given his condition the strict attention it should have had at an earlier date. Proper climate, diet and mode of life have remedied the intestinal toxemia but his arteriosclerotic changes and nephritis continue despite his winters in Egypt, summers in the hills about Geneva and his whole attention given to the task of getting well.

In another case observed over a period of 15 years the urine was normal for two years, presented evidences of faulty nitrogen metabolism without albuminuria for ten years with functional albuminuria for two years and classical urine and symptoms of contracting kidney and arteriosclerosis for one year. Death then resulted from apoplexy.

Four cases followed for periods of ten years presented evidences of faulty metabolism at the time of the first examination. Three of these showed faulty nitrogen partitions and one a faulty sulphate partition. These patients all had their metabolism fault for a considerable period prior to the development of the renal lesion and have unfortunately passed from observation.

Twenty-two cases were observed for five years. In all these a functional albuminuria and evidences of faulty metabolism were present at the time of the first examination. Faulty nitrogen partition was noted in 12, faulty sulphate partition in 7 and both faults combined in 3. All these cases have developed the classical urinary picture of a contracting kidney. While there were no direct evidences of a general arteriosclerosis in any, as far as could be learned, is it not reasonable to suppose that the hypertension, the accentuated second heart sound and the changes visible by ophthalmoscope may have in part been due to arteriosclerotic lesions other than in the kidney?

This clinical experience would seem to justify the suspicion of the toxic origin of arteriosclerosis, or more properly stated, would

corroborate the opinions of most all modern writers on the subject. In this connection I beg consideration of the interesting research of Ditman who proved experimentally that nephritis is caused by these metabolic faults. He concludes that many chemical substances, which, by complete oxidation, are converted into innocuous products, may, by incomplete oxidation be decomposed into products of great toxicity. Among the most toxic substances formed in the body are the incomplete oxidized nitrogenous products of protein decomposition.

It would take me too far afield and into disputed questions to consider the details of the faults in metabolism which are believed to be at work in these cases. Nor will I go into a minute consideration of the changes from the normal observed in the urine. In general, it may be said, as previously stated, that these changes in the urine belong to one of two types which sometimes occur together. Faults in the ratio of mineral and ethereal sulphates are frequently accompanied by an excess of indican and are referable to disturbed intestinal metabolism, or an intestinal toxemia. Faults in the nitrogen partition may or may not be accompanied by evidences of an acidosis and are probably referable to disturbed hepatic function, or if you wish a hepatotoxemia. It is generally found that these disturbances of metabolism, if not transient and due to an intercurrent disorder, are cyclic or constant though fluctuating in degree. When firmly established it is by no means a simple matter to remedy them. If they are to be eliminated it is generally necessary to make permanent changes in the patient's mode of life and habits and sometimes in occupation. It is not sufficient to have them under observation during the relatively short time of subjective ailment, but they must generally be guided for months and years. It is thus apparent why comparatively few cases of this sort are really, permanent'y relieved. It is evident that the cause usually exists for a considerable period before it produces arteriosclerotic changes and if these are present their course is favorably influenced, though not necessarily checked by the relief of the toxemia. The absence of faults in body chemistry in cases of estab'ished arteriosclerosis does not indicate that these faults did not cause the condition.

In considering the diagnosis of arteriosclerosis the cases may be

divided into two stages, as suggested by R. Clark (L. I. Med. Jonr., 9, 1909); the toxemic stage and the later stage.

Toxemic Stage.—It is my firm belief that the disturbances in metabolism precede the actual development of arteriosclerotic changes for years in most cases. During this early period the faults in the urine may be the only signs obtainable or these may be associated with symptoms referable to the toxeima rather than to any changes in the caliber of the arterioles or in the heart action. Sooner or later there is increase in arterial pressure, an increase in the heart action with slightly accentuated second sound and contraction of the small arteries as can often be demonstrated by ophthalmoscope. These changes are usually associated with indefinite clinical symptoms. A certain amount of lassitude, loss of pleasure in doing work, slight dyspnœa on exertion, occasional headaches and neuralgic pains, occasional vertigo, occasional insomnia and a pallor of the skin not due to anemia, as the blood count will be found normal. There may be slight functional albuminuria though often it is absent. At this time there are no structural changes in the vesse's and complete relief is still possible. This, however, usually demands unwelcome sacrifices in the patient's business or professional activity and thus in the social enjoyment of his family. He usually claims that the proposed regime is out of the question on this account and goes on with his toxemia into the later stages of his arteriosclerosis. When actual lesions become established it is too late to remedy the condition, though many symptoms are relieved by the abatement of the toxemia. This explains why so many well-to-do and comparatively young men are ready to do anything to regain health at a time when this is no longer possible. Undoubtedly the untiring ambition for success without regard for personal health and spurred by the extravagances of the family seeking social prominence is at the bottom of many a case of premature arteriosclerosis in the pater familias.

Later Stages.—I will not burden you with a rehearsal of the well known clinical symptoms which are the result of the pathological changes of arteriosclerosis. Eichberg, quoted by Clark, sums it up by saying that a diseased vessel means a diseased action of an organ which will later also show organic changes. The symptoms will depend on the type of the lesion, that is, on the lack

of function of the organs particularly involved. The diagnosis also offers no difficulty and the cardinal signs in the heart, the kidney, the retina and in the palpable blood vessels are so well known that they scarcely bear repetition.

The blood pressure, as determined by modern instruments, has had an unusual amount of attention during the last few years. Clark properly call attention to the fact that the tonometer measures not only the internal blood pressure, but that the readings also include the arterial wall resistance. Greater pressure with less resistance may give the same reading as less pressure with greater resistance. Readings by the oscillatory method are more accurate than those by obliteration of the pulse and are to be recomemnded. Most cases show hypertension which is usually in direct proportion to the severity of the condition. The increased pressure is nature's way to overcome the peripheral resistance and is a protection against disaster. It may, at times, be desirable to modify this increase, but reducing it to within normal limits, if possible at all, may produce serious consequences. A normal or reduced pressure which develops after the existence of high pressure usually indicates myocardial changes the result of serious involvement of the coronary arteries.

Sphygmographic tracings and changes in the viscosity of the blood show interesting features, but are scarcely of sufficient import, as yet, to justify burdening the clinician with the necessary apparatus for the determinations.

It is to hoped that closer attention to faulty body chemistry, the recognition of its serious import and that radical measures are often necessary for its relief, may be a means of preventing the premature development of artriosclerosis, particularly in the pillars of our nation, the overworked, self sacrificing mental laborer.

EXTRAGENITAL SYPHILIS.

Bukk G. Carleton, M. D.

Discussion before the N. Y. Academy of Pathological Science.

Your President has requested me to make a few remarks on syphilis in general, and comment on a few cases of extragenital syphilis.

We recognize syphilis as a chronic, infectious disease, communicable to all who are not immune, the result of acquired or hereditary contamination. There are a number of authenticated cases of syphilis having been contracted a second time. In the acquired form, the disease is transmitted by the spirochitæ pallida which entered the system through some abraded surface; the initial sore appears at the point of infection. The period between the time of infection and the appearance of the chancre is not characterized by appreciable local symptoms. The period of incubation is generally about three weeks. It may vary considerably within wide limits. It has been claimed that if the point of infection were immediately excised or cauterized, that is—within a few hours,—the disease could be aborted. Theoretically, this is acceptable, but in practice we question the excision or cauterization of what is often an absolutely inappreciable microscopic point. In a case referred by Dr. Van den Berg, the patient noticed an abrasion upon the skin a few hours after a possible inoculation. Within a few hours the abrasion and surrounding tissues were excised; the wound healed by primary union; the patient was under constant supervision, and it was not until seventy-eight days later that an eruption appeared upon the skin. The eruption did not in any way annoy him.

Dr. Van den Berg examined him first on the seventy-ninth day, and found a well developed syphilitic erythema enveloping the surface of the body covered by the clothing. There were also mucous patches on the buccal and pharyngeal mucous membranes. This case is cited for the reason that it is not uncommon to notice in medical literature the dogmatic statement that if the specific syphilitic point were cauterized or excised immediately after infection the infecting material would be removed and, therefore, there would be no secondary or tertiary manifestations. We have never known this procedure to prove successful. Experience seems to indicate that immediately following inoculation there is a very rapid extension of the infection. In connection with this subject, it is proper to recall the experiments of Mickenhoff and Roux in applying a calomel ointment to abrasions where there is any possibility of a syphilitic infection, and to those purposely infected with the idea of control. All of the experiments were successful.

In corroboration we will cite the case of a physician who had been dressing a chancre. On completing the surgical work, he noticed that his hands were cracked in a number of places across the knuckles and other points. We suggested that he immediately annoint his hands with the Mickenhoff and Roux ointment:

℞. Calomel, 33 %.
Lanoline, 10 %.
Vaseline, 57 %.

He has not developed primary or secondary syphilis. If he was infected, the calomel ointment aborted the disease. We have had a number of similar experiences and results. At the Metropolitan Hospital this prophylactic measure has never failed. It should always be kept in mind by those whose profession requires them to handle syphilitics.

A recent observer claims to have discovered the spirochitæ pallida in the spermatozoa. If further investigation proves this to be true it will account for the hereditary form of male transmission.

About ten per cent. of all cases of syphilis in the male, and fully fifty per cent. in the female, are innocently acquired. These facts must always be borne in mind when the method of infection is being considered.

Case A. is of interest in that it does not conform with the statement of De Lyle and others in that syphilitic material, if left in contact with the air for any considerable length of time, loses its infectious properties. Dr. De Lyle stated to me that if he should take syphilitic blood, put it on a knife and wave it through the air a few times the syphilitic micro-organism would be destroyed and that he would have no objection to cutting himself with that knife. However, we do not know of his having done this. Our patient was traveling from New York to a neighboring city, and was two nights aboard boat. On retiring he noticed that the bedding was not clean, but he gave little thought to it. During the journey a small abrasion was noticed on the thigh. It healed, however, in a few days. Three weeks later, at the point where the patient remembered having had the abrasion, a small, red sore was noticed, it was considered to be insignificant, and received no attention. Six weeks later the characteristic syphilitic erythema appeared on the body and in the mucous membrane of the pharynx, accompanied with painless enlargement of the superficial lymphatics.

Chancre of the tongue of innocent origin is not uncommon. It is well exemplified in the history of a student whose attention was first called to his infection by terrific headaches at night; the pain commenced in the early evening and lasted all night. At first the headaches were attributed to over-study, but the following history revealed their origin: He was exposed on the 4th of September. About three weeks later he noticed a little spot on his tongue, which did not heal. He thought it was due to poor tobacco, but consulted his physician, who brought him to my office. The sore on the tongue presented a painless indurated lesion on the left side of the dorsum near the tip. The Triponema was found in scrapings from the lesion. The sclerosis underlying the lesion had been gradually increasing, and at the time of my examination the primary lesion was as large as a ten cent piece,—presented a red surface,—was slightly depressed toward the centre, and covered by a grayish membrane. The associated lymphatic glands were enlarged and indurated. On December 11th all of the superficial lymphatic glands of the body were indurated, the body in general was covered with small, flat, papular syphilides, some of which had commenced to scale off toward the circumference, the scales being particularly well marked about their base.

Chancre of the lip is comparatively quite common. In the case presented, a white papule first appeared on the lip, and the patient applied a little peroxide of hydrogen. A few days later a physician cauterized it with nitrate of silver. When the patient called at our office there was an indurated, eroded sore on the lip about three-quarters of an inch long and half an inch in width. The underlying induration extended deep into the tissues. The associated submaxillary and sublingual glands were enlarged and indurated, Scrapings from the side of the sore contained the spirochetæ. Four weeks later his body became covered with a macular rash, which, under treatment, disappeared in two weeks. Six weeks later he had a few papules on the chest and a small mucous patch on the buccal mucous membrane. The mouth lesions was largely intensified by local irritation from tobacco. As soon as the patient discontinued the use of tobacco, the lesions responded quickly to local treatment.

In another case the primary lesion on the lip was at first sup-

posed to be a simple cold sore and was neglected. It extended rapidly, however, and when examined a month later it looked as though one-half of the upper lip had been destroyed. The lesion was characteristically indurated. Under treatment the induration disappeared, the ulceration healed, leaving the lip in a very presentable condition.

It should be remembered that in chancre of the lip the depth of the ulceration and the extent of the induration vary greatly. In some, the induration is so pronounced as to interfere with the patient's taking the proper amount of food; in others, it may be of the parchment variety, and not extensive.

Chancre of the finger and hand, before the days of rubber gloves, was frequently observed upon the obstetrician and gynæcologist. A physician, fourteen years ago, while in college, contracted syphilis while making a gynæcological examination. Three weeks later, a sore appeared, commencing as an indurated papule at the base of the nail. The end of the index finger soon became much swollen. The superficial erosion gave way to marked ulceration. The induration around the finger nail was not painful. There was no enlargement of the epitrochlear gland. The associated axillary glands were swollen, but not painful or inflamed. Six weeks later the general erythema appeared. Treatment was well carried out for the first three months, but as the symptoms subsided he failed to give himself proper attention. For the past year he has been suffering from myalgia, particularly at night, the pain in the sciatic region often interfering with his professional duties. Medication for the past three months has proved him to be amenable to treatment.

Chancre of the anus is well exemplified in the following case: Two months before the patient visited us he noticed a pimple at the edge of the anus. This pimple occasionally bled. Movements of the bowels were slightly painful. Examination revealed an elongated indurated lesion extending from the margin of the anus along an anal fold. The lesion was somewhat excoriated and gave a slight serous discharge. The lesion was not painful to touch. Scrapings from the sore showed the presence of the spirochetæ. All the superficial lymphatics of the body were painlessly swollen and indurated. He had dull, vague pains in the occiput and frontal

regions, which were worse at night. He also complained of backache and general malaise. All parts of the body covered by the clothing presented a specific erythema. A similar macular rash was present on the soft palate and roof of the mouth, causing some general soreness.

Chancre of the cheek is sometimes met with following a razor cut. In one town I saw three primary lesions of this nature. All had been shaved by the same barber. The original cuts healed quickly, but in about three weeks they reopened rapidly, developing into bright red sores about an inch in diameter. One of these was much indurated, extending into the cheek. The others presented superficial indurations. During the night a crust would form over them, which, when reomved, revealed a glistening red glazed surface.

The importance of early recognition of extragenital chancre cannot be over-estimated. This duty to the patient and the public does not require emphasis before this society.

These cases show the necessity of careful attention to all extragenital, as well as genital abrasions, apthhous patches, pimples, etc., which, without apparent cause tend to enlarge, become eroded or ulcerated, have indurated bases and are accompanied by a painless enlargement of the associated lymphatic glands.

NOTES ON THE MEDICAL SERVICE AT THE FLOWER HOSPITAL FOR MARCH, 1910.

By Walter Sands Mills, A. B., M. D.

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The following is a brief summary of the cases in my service at the Flower Hospital during the month of March, 1910. The medical cases are cared for by the Departments of Practice and of Materia Medica, each Department having its own wards to supervise. The term of duty for the visiting physician is one month. Each man in turn, then, takes charge of cases that have been left over by his predecessor, and at the end of the month leaves cases for his successor. I am indebted to the two very efficient house physicians, Dr. W. W. Brown and Dr. H. E. Ayres for their able co-operation during the month.

Case 1.—Man, aged 18. In the hospital February 11 to March

1, with acute articular rheumatism. He had a mitral insufficiency that was giving no trouble when he left. The rheumatism was cured. Patient went out after examination by me on March 1.

Case 2.—Man, aged 25. Case of acute articular rheumatism. This patient had a mitral insufficiency. Left the hospital cured of his rheumatism March 21.

Case 3.—Man, aged 45. Lobar pneumonia of right side. Entered hospital February 5, dismissed cured March 2.

Case 4.—Man, aged 24. Driver of a gasoline wagon. Was overcome by the fumes from the gasoline and brought in as an emergency case February 28. Rest in bed without other special treatment was sufficient. Dismissed cured March 2.

Case 5.—Man, aged 45. Acute alcoholism, delirium tremens, pneumonia, death. Brought to the hospital February 28, died March 2.

Case 6.—Man, aged 49. Ill at home with acute articular rheumatism for three weeks. Brought to hospital March 1, died March 3. This case developed a temperature of 108° on the last day.

Case 7.—Man, 25. Frontal headache, precordial pain. A soldier, picked up on the street, March 2, removed to soldiers' hospital at Governor's Island, March 3, improved.

Case 8.—Man, aged 36. Acute alcoholism, double pneumonia, death. Brought to hospital March 1, died March 3.

Case 9.—Man, aged 39. Entered hospital March, with grip. Dismissed cured March 6.

Case 10.—Man, aged 42. Brought to hospital with delirium tremens February 21. Dismissed cured March 6.

Case 11.—Man, aged 27. Entered hospital February 21, with acute articular rheumatism. Dismissed cured March 8.

Case 12.—Man, aged 57. Entered hospital February 28, as convalescent from typhoid. Dismissed cured March 8.

Case 13.—Man, aged 27. Entered hospital suffering mild symptoms from coal gas March 6. Dismissed cured March 8.

Case 14.—Man, aged 56. Brought to hospital suffering from a spree, stomach upset, March 8. Dismissed cured March 10.

Case 15.—Man, aged 25. An early case of pulmonary tuberculosis. Entered March 7, left March 10.

Case 16.—Woman, aged 20. Entered hospital with acute articular

rheumatism January 7. Patient left the hospital March 10, cured of her rheumatism, but with a mitral stenosis and aortic regurgitation.

Case 17.—Man, aged 27. Entered hospital March 9, left March 11. No symptoms.

Case 18.—Man, aged 40. Entered hospital March 8, with alcoholic gastritis. Dismissed cured March 11.

Case 19.—Woman, aged 46. Menopause. Entered hospital March 10. Left March 13.

Case 20.—Woman, aged 23. Had acute articular rheumatism eleven years ago. Entered hospital February 21 with pneumonia. She also had a double mitral and aortic regurgitation murmur. She got better, and on March 6 was allowed to sit up. Temperature and pu'se went up so she was promptly returned to bed. On the 9th a diagnosis of pneumonia was made. Patient became dissatisfied on March 13, was taken away by her family after signing a release.

Case 21.—Girl, aged 14. Scarlet fever. Entered March 14. This girl was colored. She gave a history of having been ill two weeks. The throat had been sore. Temperature on admission 104°, pulse 140. This was an ambulance case, and it so happened, arrived while I was in the ward. Eaxmination disclosed active desquamation, especially about the neck and upper part of the back. Lower down on the back there were small white spots scattered about. The patient was immediately removed from the ward and isolated. A diagnosis of scarlet fever was made and the patient removed to the Health Department Hospital next day, March 15. No secondary cases developed.

Case 22.—Woman, aged 25. This patient entered the hospital March 4. She had an old mitral insufficiency, which was acting badly. She left in good condition March 15.

Case 23.—Man, aged 61. Was brought into the hospital March 10 with pneumonia of the middle lobe on the left. On the 14th the whole right side was involved. On the 15th patient died.

Case 24.—Man, aged 18. Patient entered hospital March 11. He had an old mitral insufficiency. Discharged in good condition March 15.

Case 25.—Man, aged 76. Was brought to hospital March 18 in uremic coma. Died March 19.

Case 26.—Woman, aged 36. Was brought to hospital March 17 in uremic convulsions. Died March 19.

Case 27.—Boy, aged 17. Was brought to the hospital March 18. He was an Italian and unable to speak English. Nervous symptoms developed and he was transferred to the service of the neurologist, Dr. John E. Wilson, March 20.

Case 28.—Man, aged 28. This man entered the hospital March 3 with all the classical signs of lobar pneumonia. The only unusual feature was that the left upper lobe was the seat of the disease. He was very sick when he entered, but made a most beautiful recovery. He was dismissed cured March 21.

Case 29.—Boy, aged 17. Entered the hospital March 4 with the grip. He also developed earache. He was dismissed cured of both March 22.

Case 30.—Man, aged 48. Entered the hospital February 19 with pleuritic effusion. He was tapped March 2 and had 56 ounces of fluid removed, and again March 15, when 45 ounces more were removed. He left the hospital in good condition March 22.

Case 31.—Man, aged 30. This patient entered the hospital March 10 with a typical case of lobar pneumonia, but of the right upper lobe. He made an uninterrupted recovery and was dismissed cured March 22.

Case 32.—Woman, aged 23. She danced herself into a fainting attack at a St. Patrick's Day celebration, and was brought into the hospital in the early hours of March 18. She had anemia. She was discharged in good condition March 22.

Case 33.—A woman, aged 50. She was brought into the hospital suffering from a failing heart and pulmonary edema March 21. She died March 23.

Case 34.—Boy, aged 12. Tetanus. The boy was in convulsions when first seen by the ambulance surgeon. He gave a history of stepping on a nail a week before. Examination revealed an infected foot. He was brought into the hospital on the morning of March 23. One injection of tetanus antitoxin was given. The convulsions and unconsciousness, alternating with periods of consciousness, lasted for twenty-four hours when he died. The temperature rose to 105°, pulse 150, respiration 35.

Case 35.—Man, aged 35. Acute articular rheumatism. This man had a similar attack a year ago. His heart was not affected

then, nor was it involved this time. He was dismissed cured March 27.

Case 36.—Man, aged 26. Patient entered the hospital March 15. He had pains in the region of the gall-bladder and was very jaundiced. He ran a slight temperature and had a rapid pulse. I made a diagnosis of infectious cholecystitis with probable gall-stones. Patient was transferred to the surgical department. Operation was proposed and consent given, but the patient left the hospital in a huff March 27, much improved without operation.

Case 37.—Colored boy, aged 17. Entered the hospital March 18 with temperature of 104 and some of the physical signs of pneumonia. The temperature was normal in forty-eight hours, and patient was dismissed cured March 27.

Case 38.—Man, aged 29. Was found unconscious in his room from gas poisoning. His gas light had blown out in the night. Admitted to hospital March 25. The hospital routine for bad cases was followed, namely, a pint of blood was abstracted, and a pint of normal salt solution injected intravenously. Patient was dismissed cured March 27.

Case 39.—Man, aged 42. Entered hospital January 7, with acute articular rheumatism. Patient developed a heart lesion. He left the hospital in good condition March 29.

Case 40.—Boy, aged 17. Entered the hospital March 16, with acute articular rheumatism. For several days he was quite sick, but once he began to improve recovery was rapid. Patient left the hospital cured March 29.

Case 41.—Man, aged 32. Could speak no English. Entered the hospital March 27. with lobar pneumonia. Left against our advice after signing a release March 29.

The following cases were still in the wards March 31, when my term of duty ended:

Case 45.—Man, aged 32. This patient first had an attack of acute articular rheumatism eight years ago. Since then he has been laid up a part of every winter with dropsy, due to a diseased heart and kidneys. He entered the hospital December 24, 1909, and was able to leave February 3. On February 16 he had to return. He came with general edema. At the present moment the edema is gone and the patient is able to sit up a little last day.

Case 43.—Woman, aged 52. Entered hospital December 31, 1909, in very much the same condition as Case 42. Patient was able to sit up a good deal during the latter half of March, but for two or three days now has been obliged to stay in bed again, because of her heart condition.

Case 44.—Entered hospital February 1, with chronic rhuematism. Was better early in the month. Since March 5 has been in bed. Has slight fever, some pains, and an aortic lesion. Improving.

Case 45.—Man, aged 40. Entered hospital March 1, with acute articular rheumatism. Is much better now and ought to be well soon.

Case 46.—Girl, aged 17. Has an old mitral lesion. Entered hospital March 5, with what appears to be a mild typhoid fever. The Widal reaction is negative, although, clinically, the disease is typhoid. Still in bed with temperature of 102.

Case 47.—Colored man, aged 33. Entered hospital with lobar pneumonia March 8. The symptoms cleared up and temperature went down almost to normal for a few days. Later the temperature went up again. The patient now has empyema.

Case 48.—Man, aged 21. Entered the hospital March 11, with pleuritic pains. A case of pulmonary tuberculosis in the early stage.

Case 49.—Woman, aged 32. Entered the hospital March 14 with acute articular rheumatism. Is getting well.

Case 50.—Man, aged 25. Entered the hospital March 14, with acute articular rheumatism, probably of gonorrhœal origin. Has received two injections of anti-gonorrhœal serum. Is getting well.

Case 51.—Woman, aged 47. Entered the hosiptal March 19, with acute articular rheumatism. Getting well.

Case 52.—Man, aged 23. This patient entered the hospital March 21. He had been taken ill with a bad attack of acute articular rheumatism a week or more previously, while out of town As soon as possible, he got to New York. When examined at the hospital, the patient had not only rheumatism, but acute endocarditis, with bad compensation, and also a lobar pneumonia. Notwithstanding the patient's desperate condition, he was still alive and improving when I went off service.

Case 53.—Woman, aged 50. Entered hospital March 22, suffering from typhoid fever. Running a normal course.

Case 54.—Man, aged 30. Entered the hospital March 23, near the end of an attack of pnemuonia. Nearly ready to go home.

Case 55.—Man, aged 42. Entered hospital March 24, suffering from acute articular rheumatism. Doing well.

Case 56.—Man, aged 59. Entered the hospital March 24, suffering from acute articular rheumatism.

Case 57.—Colored man, aged 47. Entered the hospital March 24, with pneumonia. Heart not in good condition. Adrenalin was given—one drop to nine of water—hypodermically, on account of a developing edema of the lungs. The result was very satisfactory. Patient doing fairly well.

Case 58.—Man, aged 27. Entered hospital March 25, convalescent from pneumonia.

Case 59.—Man, aged 41. Entered the hospital March 26, with failing compensation of the heart. Patient was a powerfully built man, who had worked in the various under river tunnels during their construction. He had had several attacks of caisson disease, and this was probably the end result of the repeated attacks.

Case 60.—Girl, aged 18. Entered the hospital March 29, suffering from hiccoughs. The attack started on the 26th and was still going on, although somewhat improved, on the 31st.

Case 61.—Man, aged 25. Entered the hospital March 29, with typhoid fever.

Case 62.—Man, aged 43. Entered the hospital March 30, with acute dilatation of the heart.

Case 63.—A boy, aged 17. Entered the hospital March 31, with pneumonia.

The list shows a total of 63 cases. Of this number 16 were cases of acute articular rheumatism. One died within forty-eight hours after admission—he had been sick for some time before he came to us. Five of the others developed heart lesions. One is still critically ill—the one who has pneumonia with his rheumatism.

There were 15 cases of pneumonia including the one complicated by rheumatism. Two of these cases also had deliirum tremens and died. One uncomplicated case died. One has developed an empyema. The others, with the exception of the rheumatic case, have recovered or probably will. The two cases of pneumonia in the upper lobe, although quite sick for two or three days, both made good and prompt recoveries.

INSTRUMENTS OF PRECISION IN DIAGNOSIS.

Gregg C. Birdsall, M. D., Washington, D. C.

As the tendency of the times seems to demand the most up-to-date and modern methods in the business world, so the public demands of us, the custodians of its physical welfare, the most modern, most accurate and most scientific methods in the diagnosis and treatment of disease.

During the past two decades the rapidity with which medical knowledge has advanced is absolutely astounding. The discovery of the bacterial cause of many diseases practically revolutionized diagnosis and therapeutics and led to a long series of experiments which is constantly bringing to light new problems to solve.

We know that certain conditions produce corresponding results in most cases as, for instance, a mitral regurgitation is generally followed by compensatory hypertrophy, but we often meet conditions which are atypical and obscure and which cannot be diagnosed correctly by the older methods of auscultation, percussion, palpation, etc. It is here that the newer methods of diagnosis have won a name for themselves.

I have often heard it remarked that it is not necessary for a Homœopath to make a correct diagnosis, as his remedy is selected symptomatically and not clinically. This may do very well so far as the selection of the remedy goes, but in order to decide upon proper hygienic, dietetic and prophylactic measures the correct diagnosis is imperative. I think we ought to diagnose correctly or at lesast try to diagnose every case with which we come in contact, using every means within our power to reach that end. For the determination of the pressure within the arteries we have the sphygmomanometer; to estimate the quality of the blood, we have the hæmoglobinometer and hæmocytometer; to differentiate the finer sounds within the chest walls, we have the stethoscope and the phonendoscope; with the cystoscope we examine the urinary bladder and with the gastroscope, we see what lies within the stomach walls; with the microscope we study the composite parts of our bodies and wonder at the handiwork of the Almighty.

In examining the schedules of some of our lealing medical in-

stitutions, I find that during the course of four years' study an average of seven hundred hours is devoted to the instruction of students in the newer methods of diagnosis, *i. e.*, pathological, bacteriological and microscopic work, while in the same institutions, less than one-half, or an average of two hundred and eighty-eight hours, is devoted to the instruction in the older methods.

Of all the valuable aids to diagnosis, probably the most valuable is the microscope. Without it accurate diagnosis would be almost impossible in many cases. Consider its value in diagnosing the different forms of renal disease, in differentiating specific from non-specific discharges, in the early recognition of pulmonary tuberculosis, in examination of the blood, in the differentiation of intestinal parasitic diseases, in bacteriology and pathology. In fact the modern physician cannot do without it. The microscope in in various forms has been used since the sixteenth century but it was not applied to medical work extensively until the nineteenth century. About 1870 Koch anl Pasteur began their bacteriological investigations which have since developed into a science of such magnitude that at present its limits are without bound.

The stethoscope, perhaps, comes next. As designed by Laennac it consists of a long, hollow rod, cone-shaped at one end for gathering in the sounds and flattened at the other end to fit tightly against the ear.

This was later modified by attaching to the cone rubber tubes which were adjusted in the ears by means of ear pieces. This type you are all familiar with and also the type which has in the cone a hard rubber diaphragm, which intensifies the sounds. There are numerous makes and designs of stethoscopes, all of which have, as a working basis, the same principle: localization of the chest sounds and the magnification of those sounds difficult to perceive by the ear alone.

Some physicians seldom employ the stethoscope in making chest examinations, using the ear alone in preference. I use a stethoscope for two reasons, because I hear more than with the unaided ear and, secondly, because it does not require such intimate contact with the patient, especially in infectious and contagious diseases.

A modification of the stethoscope is the phonendoscope, which is quite extensively used in outlining tumors and organs in the abdomen. The small receiver is placed over the supposed organ or

tumor and with a pen or pencil tap lightly around the instrument. When one is not tapping over the organ, the vibration is much less than when the area of the organ is struck. This method has been of much value in outlining obscure tumors and after a little practice one can acquire considerable skill in the use of the instrument.

The character of the blood is materially changed in many different diseases. For the accurate estimation of its coloring matter, several hæmoglobinometers have been invented. They all have one principle, however, as a working basis and that isthe standardized color scale with which the blood is compared. Some instruments use the blood diluted and some undiluted. The instruments in common use are the Dare, Fleischel, Gower and Talquist. The most simple and one which occupies the least amount of time with fully as accurate results is the Talquist method. It consists of a standardized color scale and a small book of absorbent paper. The paper is moistened with the blood to be examined and then compared with the color scale and the corresponding percentage read off. As the scale consists of ten divisions, the result is accurate to within ten per cent. and as all of the instruments give only an approximate value, I find this little instrument serves all practical purpose and take about one-tenth the amount of time the others require.

The hæmocytometer is an instrument used to estimate the number of corpuscles per cubic centimeter of blood. Two diluting tubes are used and the blood diluted one to ten and one to one hundred, respectively. This diluted blood is then transferred to the counting slide in the middle of which is marked out one square millimeter and the number of corpuscles falling within this square or its divisions are counted by means of the microscope and estimated according to the previous dilution.

All of you know the value of the blood count; many of you make use of it in your practice. It clears up many a doubtful diagnosis and assists the surgeon in determining when to operate. The white corpuscles normally found in the b'ood are the polymorphonuclear, large and small lymphocytes and eosinophiles. An increase in the polymorphonuclear neutrophylic variety is found in pneumonia, pleurisy, meningitis and peritonitis, but the differentiation has to be made clinically. Appendicitis, cholicystitis and salpingitis all

present right-sided pain and are all accompanied by a leucocytosis. I think the greatest value of the blood-count is the differentiation of malignant and benign tumors and determining when an inflammatory condition is becoming suppurative. Leukæmia in its early stages can be diagnosed only by a blood examination, but as this is a rare disease few of us will have the opportunity of seeing a case. Any physician can tell by the appearance of a patient when he is anæmic, but the value of the blood examination here is to determine the degree of anæmia and whether it is of the primary or secondary type, as the treatment of the two is quite diffeernt.

Various diseases produce qualitative changes in the blood without affecting the number of the corpuscles. These changes can only be noted in the stained specimen by means of the microscope. As an example of this I might mention the eosinophilia of bronchial asthma, which condition is not found in renal or cardiac asthma. Eosinophilia is also a constant feature of intestinal parasitic diseases. Hypoleucocytosis, or a diminution in the total number of leucocytes, is a constant factor in typhoid fever and whenever an increase in the number of leucocytes is observed in a suspected case of typhoid it is quite certain that either a complication exists or that the diagnosis is wrong.

During the past decade much attention has been given the determination of blood-pressure. Numerous methods have been devised to attain this end. All have for their basic principle the force that is required for the obliteration of the pulse, this being derived from the older method of measuring blood pressure by means of the finger on the radial pulse. As you are aware the digital method is not at all satisfactory and sometimes misleading. I have frequently felt pulses which seemed of high tension but the blood pressure was practically normal.

Some of the blood pressure instruments use air, some water, some mercury, and some a spiral spring. Some make tension on the arteries of the finger, some compress the radial artery at the wrist and others, which is the most common form, compress the brachial artery by means of a cuff which is inflated with air.

The first sphygmomanometer was designed by Basch in 1881. Riva Rocci brought his instrument to the attention of the profession in 1896 and Gaertner produced his tonometer in 1899. Since then, numerous instruments have been devised and the methods per-

fected until at the present time the art has practically reached its highest point. I will not tire you by giving detailed descriptions of the various instruments, but simply mention a few. The Basch instrument consists of a water pad which is pressed against a superficial artery—the radial, for instance. The water pad connects with a vessel of mercury and when pressure is made on the water it forces the mercury up a graduated tube. Sufficient pressure is used to obliterate the pulse and the height of the mercury noted. This method was improved upon by Riva Rocci, whose instrument is more easily controlled and gives more accurate results. He used a cuff on the arm which is inflated with air. This cuff is connected with the mercury chamber and pressure produced by means of a hand pump until the pulse is obliterated. Then the pressure is allowed to fall until the pulse is felt and the height of the mercury noted.

Gaertner used the finger. He blanches the finger by means of a rubber band and then inflates a ring which fits on the finger above the bleached area. The pressure in the ring is gradually lessened until the skin of the finger flushes and there is a slight throbbing felt by the patient. The scale is read at this time, which shows the pressure in the ring.

Oliver's hæmadynamometer differs quite materially from these other instruments. It consists of a recording dial and a rubber pad filled with glycerine and water having a specific gravity of 1030. The recording dial consists of a needle attached to a sensitive spiral spring. The pad is placed over a superficial artery or vein and pressure applied. The vibrations of the pulse are transmitted through the fluid in the pad to the spring and recorded by the needle. Mean blood pressure is shown by the maximum motion of the needle. Maximum blood pressure is shown by the needle ceasing to pulsate.

The average blood pressure of children is from 90 to 110; females, from 115 to 125; males, from 120 to 135. Physiologically, the blood pressure is increased after meals from five to fifteen millimeters. It is likewise slightly increased after exercise and during nervous excitement. Pathologically, the blood pressure is increased in those diseases which affect the elasticity of the blood vessels. Arterio-sclerosis always shows an increased blood pressure, the amount of increase being in proportion to the degree of hardennig of the

arterial wall. Chronic interstitial nephritis produces an increased blood pressure. In the chronic parenchymatous type, there is no increase. Hypertrophied heart does not produce as much change in the blood pressure as might be expected. During a febrile attack, there is first a rise and then a fall in the arterial tension.

Opinions differ as regards the value derived from blood pressure observation. As an efficient aid in the early diagnosis of arteriosclerosis it is most useful. By frequent observations the physician can watch the improvement or decline in a patient's condition. As an aid in prognosis, the blood pressure has been disappointing to me. Judging from some of the literature on the subject one would imagine that everyone with a high pressure died of apoplexy, but I find this not to be the case. I have been surprised to see how long some people with high arterial tension remained in apparently good health. There is no doubt but that high blood pressure predisposes to apoplexy, but we err many times by giving too serious a prognosis in these cases.

The sphygmograph has not proven of much clinical importance. It is used almost entirely in physiological experiments and in colleges for the introduction of students. Sometimes there are cases in which a pulse tracing is of interest but as a general diagnostic procedure it is not practical because of the time employed in taking the tracing and the limited results obatined.

Before closing, I wish to mention three methods of diagnosis which are not, strictly speaking, instruments of precision, but which give accurate results. These are the Widal reaction for typhoid fever, with cutaneous tuberculin reaction and the estimation of the opsonic index. The Widal reaction consists of a clumping of bacilli in a fresh typhoid culture when the serum from a typhoid patient is added to it. The von Pirquet reaction for tuberculosis consists of making two abrasions in the epidermis, into one of which Koch's old tuberculin is rubbed. The second abrasion is the control. If a papule forfs where the tuberculin was inserted, the reaction is positive. To describe to you the method of estimating the opsonic index would occupy too much time. The object of this diagnostic measure is to determine the capability of the leucocytes to destroy certain bacteria. It is of importance in serum and vaccine tehrapy to estimate when the dose should be renewed and when the bactericidal resistance is becoming lowered.

EDITORIAL

DEPARTMENT OF PUBLIC HEALTH.

A bill establishing a Department of Public Health has been presented before the United States Senate by Mr. Owen and is known as Senate Bill 6094. It calls for a department of health, the secretary of which shall be appointed by the President and shall be a member of the Cabinet.

The object of the bill is to unite the various bureaux now having to do with the matters concerning the public health under one head, which will tend to promote not only the efficiency of these organizations but will prevent the friction which is always to be found between bodies doing similar work.

If it is necessary to have a city or State department of health how much more so is it to have one of national scope which will be able to deal with questions presenting interstate complications.

Some of the duties of such a department would be:

"To stop the spread of typhoid fever through drinking sewage-polluted water of interstate streams."

"To enforce adequate quarantine regulations so as to keep out of the country plague and other similar diseases."

"To supervise interstate common carriers in so far as without supervision they prove a menace to the health of the traveling public."

"To gather data on all questions of sanitation throughout the United States."

"To study the conditions and causes of disease in various parts of the country."

"To consolidate and co-ordinate the many separate Government bureaux now engaged in independent health work."

"To publish and distribute throughout the country bulletins in relation to public health."

"To apply our existing knowledge of hygiene to our living conditions."

Such a department can be made very efficient and of great public good, if there is at the head of it the right kind of man. Otherwise it will be worse than useless.

The secretary of such a department should be at once a physician, sanitarian, and a man of considerable executive ability.

He should be one who has had some considerable experience in just such a line of work, as, for example, the Health Commissioner of our larger States.

As much as is possible, politics should be kept out of such a department and the responsible heads should be assured of permanency of position and promotion in accordance with their skill and value to the department.

COMMENCEMENT WEEK.

This will be the last opportunity for the CHIRONIAN to urge every alumnus to make his best effort to attend the celebration of the fiftieth anniversary of the Alma Mater.

You, who have come back every year to the reunions, will not have to be urged very hard, for you have learned by experience the pleasure and benefits to be derived.

You, who do not regularly come back, can do no better than to make this year an exception and then, perhaps, you may form the habit.

The following is the program of the week:

Wednesday, May 31.—Afternoon, Materia Medica Conference with prominent prescribers—College. Evening, Commencement—Mendelssohn Hall.

Wednesday, June 1.—Morning, Operative Clinics and Materia Medica Conference—College. Noon, Luncheon—College. Afternoon, Inspiration and Business Meeting of the Alumni Association—College. Evening, Alumni Smoker and Class Reunion. Notice of place will be sent later.

Thursday, June 2.—Morning, Operative Clinics and Materia Medica Conference—College. Afternoon, Public Semi-Centennial Meeting with prominent speakers—Mendelssohn Hall. Evening, Alumni Banquet—Hotel Astor, 6:30 P. M.

CORRESPONDENCE.

AMERICAN INSTITUTE OF HOMŒOPATHY.

Los Angeles, February 28th, 1910.

Dear Doctor:

Allow us to call the attention of the Homœopathic profession to the programme for the coming session of the American Institute of Homœopathy as proposed by the Local Committee of Arrangements. All the essentials will be carried out as we are going to spend about $5,000 in entertaining our guests. The arrangements may, however, be changed by the "powers that be."

From July 6 to July 11 the Reception Committee will meet every incoming train upon which members are expected and extend all aid and welcome it is possible to give.

All trains that carry large parties will be met at the borders of the State with fruit and flowers.

Buy all tickets to Long Beach and have your trunks checked to the same place. Best way is to get in early on the American Institute Specials and be taken to the door of Hotel Virginia from your own home city without change, passing a glorious time en route with your best friends in luxurious surroundings and being feted all along the line by the local homœopathic profession.

Sunday, July 10th.—Visits at Southern California State Hospital, Redlands and Riverside will probably be arranged, arriving at Hotel Virginia, Long Beach via Los Angeles, about 4 P. M.

8 P. M.—Memorial Service in main Auditorium Hotel Virginia and Sacred Concert.

Monday, July 11th.—Registration and Institute Meeting. Informal Meeting National Meissen.

8 P. M.—Reception and ball given by the Local Committee. In the intermissions Spanish dancers will give their native dances in native costume.

Tuesday.—Institute Meeting, Meissen Society's "Balloon Route" excursion.

Wednesday.—The Local Committee has chartered an ocean going vessel for the trip to the world-famed island paradise, Catalina, where glass bottom boats will be taken to view the wonderful submarine gardens and the gorgiously colored fishes. A typical Span-

ish barbecue will then be provided as well as a unique entertainment, one worth coming 3,500 miles to see,—especially as you need pay only about one-half fare from any point the special trains touch. Think of a round trip from Chicago to California and return by different route for about $62, New York for $98, and Boston, $99!

Thursday.—Institute Meeting. 6:30 P. M., dinner and oratory. 8:30 P. M., California State Meissen entertainment and musical.

Friday.—Institute Meeting.

Saturday.—Special cars to Los Angeles, Ostrich Farms, South Pasadena, to Mt. Lowe (5,100 feet high), offering a view of fertile valleys, canons, mountains, inhabited cities and ocean, surpassed by none in the world. Dinner at Alpine Tavern; to Pasadena, the most beautiful residence city in the world, enjoying an auto ride around the city and environs furnished by the Board of Trade, board our special cars and return to Long Beach via Oak Knoll.

Many other trips will be provided, notably an auto trip around Los Angeles and an excursion to San Diego.

The College Medical Fraternities and the different College Alumni, as well as the Institute "clubs," will have their own special doings, which are being arranged.

Remember, ample meeting places for everything will be found at Hotel Virginia, Long Beach, and this hotel will be headquarters.

Personally, you cannot afford to miss this meeting. It will repay you in pleasure many times over. It will be the Institute Meeting you will always refer to as the best ever.

You owe it to your wife, daughters and yourself to take this glorious trip and bring them along.

You owe it to the Institute to support and aid in every way possible The Homœopathic Society by your presence.

You owe it to the California profession—who have travelled from 2,000 to 3,500 miles every year to attend the Institute Meetings—to cross the Continent once in the 66 years of the Institute's existence. Show your appreciation of our efforts by aiding us in spending our hospitality money.

Reemmber the American Institute's Specials will arirve in time for the Sessions of 1910—July 11th to 16th.

Fraternally yours,

WALTER E. NICHOLS,
Chairman Local Press Committee.

Pasadena, Cal.

Editor of CHIRONIAN.

Dear Sir:—Among some old papers I found the enclosed bit of verse written by our beloved Helmuth to my father to express regret at being unable to attend a club supper at our house.

Believing that many of the old boys would like to enjoy its delightful rhyming as I have done, I send it in for its first publication.

Fraternally yours,

J. W. DOWLING.

I.

Oh, my friend, dear Dr. Dowling, I've a terrible coryza,
And a wheezing respiration full of sighs and husky moans,
With a constant lachrymation and a nasal intonation,
From catarrhal inflammation of the turbinated bones.

II.

I am wheezing and I'm sneezing and my conversation's laden
With a copious addition of abortive Bs and Ds.
From whence do I derive a—red and swollen conjunctiva
And a frequent inclination to incontinently sneeze?

III.

Now this malady outrageous, although 'tis not contagious
Will prevent my being present in your dining room so bright
So excuse my dereliction with the most sincere conviction
That against my inclination I stay at home to-night.

W. TOD HELMUTH.

My Dear Doctor;—

Will you kindly give the enclosed item space in your next issue? With best wishes for the success of the CHIRONIAN, I am

Fraternally yours,

WILLIAM A. BOIES.

April 20th, 1910

Tennessee needs more good homœopaths. The State is one abounding in natural resources. The climate is delightful. The State is rapidly pushing to the front as a manufacturing center and with the available coal and timber resources it is destined to become one of the foremost States in the Union. There are many good openings for up-to-date homœopaths and any information along this line will be cheerfully given by communicating with Dr. William A. Boies, of Knoxville, Tenn.

OBITUARY.

The Rev. Dr. Roswell D. Smith, 1880, who was first educated for the ministry and afterward took his degree in medicine at Alma Mater, died on Saturday, March 19th, 1910, at his home, 1258 Boswell Road, Bronx, in his seventy-seventh year. He was born in Pound Ridge, Westchester county, and was a graduate of New York University and post-graduate student at Princeton Theological Seminary. At his death he was the oldest living graduate of New York University, being a member of the Class of '59. After five years in charge of a church in South East New York, Dr. Smith took the pastorate of a prominent Presbyterian church in Elizabeth, N. J., where he remained for many years, during which period he studied medicine. He later opened offices in Manhattan and practiced there for twenty-five years. He occasionally preached for ministers who were ill or on vacation. He leaves two sons and one daughter.

PRIVILEGES OF ALUMNI.

It was my privilege, a few weeks ago, to be in Chicago, attending the meetings of the Council of the A. M. A., and of other medical bodies. What gave me as much pleasure as anything else, during those meetings, was to hear the name of my Alma Mater read as one of those rated in class "A" among the medical colleges of America. The report of the secretary puts the colleges of this class in the minority. My mind reverting to the subject, later, the questions arose: Why is the N. Y. H. M. C. and F. H. in this class? Who keeps it there? Is there any danger that it may some day fall from its exalted position? While trying to answer these ques-

tions, to myself, many factors presented themselves as causes. Among them were:

1st. That many of the early supporters and officers of the college, notably, T. F. Allen, were wise enough to foresee that laboratories, libraries, dispensaries, hospitals and scientists who should devote their entire time to teaching, would some day be necessary requisites for a first-class medical college, and rea'izing what would be required these men had the ability and dispostiion to secure the money without which the buildings and apparatus could not have been secured.

2d. That the college is in a large city where amp'e material for the anatomical laboratories and the clinics are always available.

3d. That the trustees of the college have had the business sagacity to use the money, generously, for the benefit of the students.

4th. That the *name* and *principles* of *Homœopathy* have always been and are still associate with the college.

5th. That such men as Dunham, Dowling, Allen, Helmuth, Dearborn, Descher, Lilienthal, Norton, Doughty, King and many others have given the best of their lives to the work of the college.

My knowledge and experience with medical col'eges tells me that other colleges which have had sufficient funds to supply all demands for laboratories, libraries, dispensaries, and hospita's; which have been in cities large enough to furnish ample material for clinics and anatomical laboratories; with which have been associated a long list of illustrious names, are now defunct and that there is nothing to assure us that the N. Y. College under similar conditions would not meet a similar fate. In other words I was forced to recognize the fact that something besides laboratories, libraries, clinical material and a teaching staff are necessary to keep a medical college alive and in the "A" class.

The greatest need of the New York or of any medical college is a *good number* of *good* students. Special stress should be put on the quality of the students. He should be *good enough* to make a *good alumnus*. An alumnus who can pass his State Board with credit to his college; an alumnus whose success in practice will attract attention to him and through him to his college; an alumnus whose life in the community will be such that parents of prospective medical students can point to him as an example; an alumnus who

will exhibit such social traits as will attract young men to him and his profession. In short, an alumnus who, by his hand, his head, his heart, his words, will act as a magnet drawing others like him to his Alma Mater. Only by having such Alumni can the perpetuity of a medical college be assured. But simply having such Alumni will not be sufficient. The Alumni must be organized, must plan, must execute the plans. This being true, it seems to me that there should be 1,200 Alumni present at the fiftieth anniversary of our Alma Mater to formulate plans and to obtain enthusiasm enough to so execute these plans that our Alma Mater shall always be rated in class "A" of the medical colleges of the world.

There is no privilege which I enjoy more than to travel 1,500 miles for the purpose of attending the annual meeting of our Alumni Association, and shaking hands with "the boys."

Come, let's make the membership 1,500.

GEORGE ROYAL.

Des Moines, April 6th, 1910.

ALUMNI NOTES.

Dr. John B. Garrison will remove from 115 East 71st St., New York, to "The Sydenham," 616 Madison Ave., Telephone, 1470 Plaza, on May first.

Dr. Homer I. Ostrom announces that on April 7th, he will remove his office to 130 West 57th St. Office hours, 10 A. M. to 12 M., and by appointment. Telephone, 5520, Columbus.

Dr. R. C. Eckardt, '07, announces that he has opened an office for the practice of medicine and surgery, at 34 South Arlington Avenue, East Orange, N. J. Office hours, 10 to 12:30, 5 to 6:30, and by appointment. Telephone, 223 Orange.

GENITOURINARY SUGGESTIONS WORTH REMEMBERING.

By Abraham Leo Wolbarst, M. D., New York.

In inserting a sound or other inflexible instrument into the bladder, pain and discomfort will be eliminated to a considerable extent if gentle but firm pressure is made upward and backward on the perineum; this enables the instrument to hug the roof of the canal more easily. Conversely, in removing such an instrument, it will be surprising to see how much comfort is added to the patient, if the same firm but gentle pressure is made with the finger tips of the free hand downward and backward under the public arch; this brings the instrument closer to the floor of the urethra, and makes its removal much less annoying and painful.

In the course of an acute antero-posterior urethritis, with much pus in the urine and urinary symptoms, do not misinterpret the sudden clearing up of the urine passed into the second glass by the patient. This is an invariable warning of an impending epididymitis.

In acute gonorrhœal urethritis, the presence of a small meatus urinarius predisposes to an increased severity of the inflammation. Meatotomy is imperative, in spite of the profuse discharge. The wound is not usually affected in the least degree by the gonococcus infection in the urethra. During the healing stage it is well to keep a small pledget of absorbent cotton soaked in bichloride solution between the lips of the meatus constantly. This prevents unduly rapid closure of the wound with contraction, and keeps it clean at the same time.

Massage of the prostate should always be followed by an intravesical irrigation of a mild antiseptic solution; otherwise, the patient may develop a new infection, produced by depositing the germs that have lain dormant in the prostate upon the new and susceptible soil of the urethra.—*From International Journal of Surgery.*